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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/601,151	06/20/2003	Achintya K. Bhowmik	ITL.0982US (P16217)	7131
7590 11/17/2005 Timothy N. Trop TROP, PRUNER & HU, P.C. STE. 100 8554 KATY FWY HOUSTON, TX 77024-1841			EXAMINER LEPISTO, RYAN A	
			ART UNIT 2883	PAPER NUMBER

DATE MAILED: 11/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/601,151	BHOWMIK ET AL.	
	Examiner	Art Unit	
	Ryan Lepisto	2883	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 20 October 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1,4-13,16,17,19-29,32,33 and 36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,4-13,16,17,19-21,29,32 and 33 is/are allowed.
- 6) ☒ Claim(s) 22,24-28 and 36 is/are rejected.
- 7) ☒ Claim(s) 23 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 June 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. **Claims 22, 24-26, 28 and 36** are rejected under 35 U.S.C. 102(b) as being anticipated by **Han et al (US 6,188,818 B1)** (Han). Han teaches a PLC (substrate 10) optical wavelength multiplexer/demultiplexer (Fig. 1) that flattens spectral output comprising an input coupler (112), an output coupler (116) and array waveguides (114) each having a different length than its neighbor and therefore every pair will have a different length (column 4 lines 22-55).
2. **Claims 22, 27 and 36** are rejected under 35 U.S.C. 102(b) as being anticipated by **Fincato et al (US 6,285,810 B1)** (Fincato). Fincato teaches an optical filter (Fig. 13 with subcomponents shown in Figs. 11 and 12) having a flat spectral response (shown in Fig. 17) comprising an input directional coupler (AD1), an output directional coupler (AD2), a waveguide pair (see Fig. 13) coupled to the output coupler (AD2) and have a length difference (column 12 lines 17-19, column 14 lines 55-67, column 16 lines 5-7).

***Allowable Subject Matter***

3. **Claims 1, 4-13, 16-17, 19-21, 29 and 32-33** are allowed.

The following is a statement of reasons for the indication of allowable subject matter:

With regard to claims 1, 8, 17, 29 and 33: These claims are allowable over the prior art of record because the latter, either alone or in combination, does not disclose nor render obvious an arrayed waveguide grating including an output slab waveguide with pairs of output waveguides coupled to the output slab waveguide and directional couplers or multi-mode interference couplers wherein the primary channel spacing (as defined by applicant) between paired first and second waveguides coupled to the same coupler is different than the secondary channel spacing (as defined by applicant) between the waveguides coupled to different but adjacent couplers, or the pairs of output waveguides having the length relationship stated in the equation of claim 17, in combination with the rest of the claimed limitations.

With regard to claims 4-7, 9-13, 16, 19-21 and 32: These claims are allowable over the prior art of record because they depend from allowable claims.

4. **Claim 23** is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: This claim would be allowable over the prior art of record if rewritten in

independent form including all of the limitations of the base claim and any intervening claims because the latter, either alone or in combination, does not disclose nor render obvious a waveguide pair coupled to an output waveguide coupler wherein the length difference of the pair is approximate to the equation of claim 23 such that a flat spectral output signal is produced, in combination with the rest of the claimed limitations.

#### ***Response to Arguments***

5. Applicant's affidavit have been considered and overcomes the Dragone reference but is moot in view of the new ground(s) of rejection.

#### ***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ryan Lepisto whose telephone number is (571) 272-1946. The examiner can normally be reached on M-F 7:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank Font can be reached on (571) 272-2415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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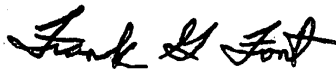
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Ryan Lepisto

Art Unit 2883

Date: 11/10/05



Frank Font

Supervisory Patent Examiner

Technology Center 2800